

Energy Efficiency Project Early Action Compact

Shreveport, LA MSA

Background



- The Shreveport, LA MSA (Bossier, Caddo and Webster parishes) participated in the Early Action Compact (EAC) Program in anticipation of designations under the 8-hour ozone National Ambient Air Quality Standards
 - Considerable stakeholder involvement in EAC development
- The area was designated attainment for 8-hour ozone (69 FR 23858)
- EPA proposed approval of EAC SIP on May 12, 2005 (70 FR 25000)
 - Comment period ended June 13, 2005
- Expect final approval in September 2005



Energy Efficiency Project

- One of the EAC Local Control Measures Commitments
 - 20 Year Contract with Johnson Controls to Install Energy Conservation Equipment in 33 City Buildings
 - Will Reduce End-Use Demand for Electricity Which Should Reduce Generation at Nearby Power Plants Reducing Their NO_x Emissions
 - Estimated NO_x Reduction—0.041 tons per day

SIP



- Quantifying the Emission Reduction from Energy Efficiency Projects for SIPs is Complicated
 - Requires Determining
 - Which Power Plant's Emissions Will Be Reduced
 - Will Those Emissions Reductions Affect Attainability in the Nonattainment Area?

3 Methodologies



- Economic Dispatch from LSUCES
- Power Control Area Dispatch from EPA
- Plant Average from NREL

Comparison of Different NO_x Emission Factor Estimates (lbs/MWh)

- Economic Dispatch – 2.85
- Power Control Area Dispatch – 3.37
- Plant Average – 1.95 to 4.63
- Savings – 9,121,335 kWh/yr
- LA DEQ Chose to Use the Average of the Results from Each Methodology -- 3.30 for quantification in the SIP



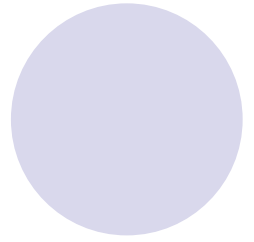
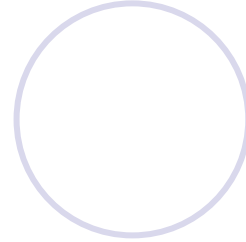
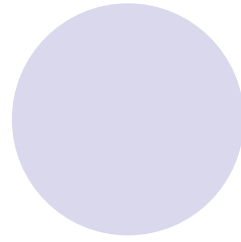
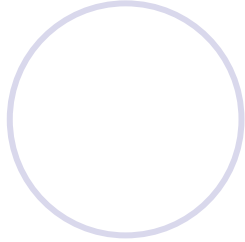
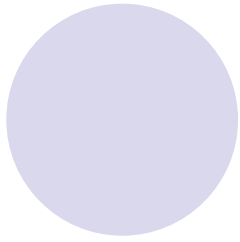
Observations and Conclusion

- NOx Reductions Almost Inconsequential
- Shreveport Area in 8-Hour Ozone Attainment (current DV 77 ppb)
- EPA's Proposal of Approval of Shreveport EAC May Rest on Bullets 1 and 2 Above
- Had Shreveport Area Been Classified as Nonattainment/Deferred or the NOx Reductions been Larger, EPA May Have Required More Detailed Analysis

Acknowledgments



- Methods for Quantification of NO_x Reduction
 - David Dismukes and Dmitry Mesyanzhinov (LSUCES)
 - Art Diem (EPA)
 - Adam Chambers (NREL)



<http://www.deq.louisiana.gov/evaluation>